REMARKS

Applicant has carefully reviewed this Application in light of the Office Action mailed September 16, 2003 (Paper No. 4). Claims 1-24 are pending in this Application. Claims 1-7 and 10-24 stand rejected under 35 U.S.C. §102(b) and Claims 8 and 9 stand rejected under 35 U.S.C. §103. Applicant has amended Claims 1, 11, 16, 17 and 21 to further define various features of Applicant's invention. Applicant respectfully requests reconsideration and favorable action in this case.

Rejections under 35 U.S.C. §102

Claims 1-5 and 11-21 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,472,811 issued to Prahalad K. Vasudev et al. ("Vasudev").

Claims 1-7 and 10-24 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,935,733 issued to Charles R. Scott et al. ("Scott").

Vasudev discloses a method of fabrication for phase shifting photomasks. A multilayered optical coating is formed on a substrate including open regions that form phase shifters. (Col. 4, Lines 7-11).

Scott discloses a mask structure for use in photolithography. The mask includes an absorbing layer deposited in trenches formed in a transmissive material. (Col. 6, Lines 5-10).

Claim 1, as amended, recites a method comprising the step of "forming a single layer of transmission balancing material over the substrate, the transmission balancing material having an index of refraction greater than the index of refraction of the substrate and being substantially transparent to at least one wavelength."

Claim 11, as amended, recites a method comprising the step of "forming a single transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a second refractive index greater than the first refractive index and being substantially transparent to at least one wavelength."

Claim 16, as amended, recites a phase shifting mask comprising "a single transparent transmission balancing layer formed on the patterned absorber layer, the transmission balancing layer operable to retain refracted light within recessed transmissive portion."

Claim 21, as amended, recites a method comprising the step of "forming a single transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a refractive index greater than the refractive index of air and being substantially transparent to at least one wavelength."

Applicants respectfully submit that the cited reference fails to disclose each and every element of Applicants' invention. Vasudev and Scott fail to teach a method for fabricating a transmission balanced photomask comprising the step of "forming a single layer of transmission balancing material over the substrate, the transmission balancing material having an index of refraction greater than the index of refraction of the substrate and being substantially transparent to at least one wavelength," as recited by amended Claim 1. Vasudev and Scott also fail to disclose a method for fabricating a phase shifting mask comprising the step of "forming a single transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a second refractive index greater than the first refractive index and being substantially transparent to at least one wavelength," as recited in amended Claim 11. Additionally, Vasudev and Scott fail to teach or suggest a phase shifting mask comprising "a single transparent transmission balancing layer formed on the patterned absorber layer, the transmission balancing layer operable to retain refracted light within recessed transmissive portion," as recited by amended Claim 16. Finally, Vasudev and Scott fail to disclose a method for fabricating a phase shifting mask comprising the step of "forming a single transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a refractive index greater than the refractive index of air and being substantially transparent to at least one wavelength," as recited in amended Claim 21. The cited reference fails to disclose the recited limitations and, therefore, cannot anticipate Claims 1, 11, 16 and 21.

Given that Claims 2-7 and 10 depend from Claim 1, Claims 12-15 depend from Claim 11, Claims 17-20 depend from Claim 16, and Claims 22-24 depend from Claim 21, Applicants respectfully submit that Claims 2-7, 10, 12-15, 17-20 and 22-24 are allowable. As such, Applicants respectfully request that the Examiner withdraw the rejections and allow Claims 1-7 and 10-24.

Rejections under 35 U.S.C. §103

Claims 8-9 stand rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Vasudev et al. or Scott et al.

Claims 8 and 9 depend from and provide further patentable limitations to allowable Claim 1. Accordingly, Applicant respectfully requests that the Examiner reconsider, withdraw the rejections and allow Claims 8 and 9.

CONCLUSION

Applicant appreciates the Examiner's careful review of the application. Applicant has now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. For the foregoing reasons, Applicant respectfully requests reconsideration of the rejections and full allowance of Claims 1-24 as amended.

Applicants enclose a Petition for Extension of Time (One Month) and a check in the amount of $110.00 for the filing fee and do not believe that any additional fee is due, however, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2581.

Respectfully submitted,

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